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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,697	03/17/2004	Toshiaki Ishii	1021.43671X00	1862

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EXAMINER
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GRAYBILL, DAVID E

ART UNIT	PAPER NUMBER
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2822

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/801,697	Applicant(s) ISHII ET AL.	
	Examiner David E. Graybill	Art Unit 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 4,5,9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-8 and 11-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2 pages</u> . | 6) <input type="checkbox"/> Other: _____  |

Claims 4, 5, 9 and 10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5-15-6.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Page 12, line 8, reference sign "5." Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 is rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility. Specifically, there is no asserted utility for the invention, "said adhesive is formed by a two color printing process."

Claim 12 is also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8 and 11 are rejected under 35 U.S.C. 101 as being non-statutory because they improperly embrace or overlap two different statutory classes of invention, namely, manufacture and process of using the manufacture, which statutory classes are set forth only in the alternative in 35 U.S.C. 101. In particular, claims 8 and 11 are drawn to manufactures, but the limitations, "wherein said electronic circuit apparatus is fixed on the

interior of an automatic transmission assembly of an automobile, and wherein said cooling medium is a transmission fluid," and, "said cooling medium is circulated in the stacked electronic circuit apparatuses," are drawn to processes of using the manufactures.

Also claims 8 and 11 are rejected under 35 U.S.C. 112, second paragraph, because they are directed to both manufacture and a process of using the manufacture. As a result, the scope of the claims cannot be determined. See MPEP 2173.05(p)II. Specifically, claims 8 and 11 are drawn to manufactures, but the limitations, "wherein said electronic circuit apparatus is fixed on the interior of an automatic transmission assembly of an automobile, and wherein said cooling medium is a transmission fluid," and, "said cooling medium is circulated in the stacked electronic circuit apparatuses," are drawn to processes of using the manufactures.

Claims 3 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3 the scope of the language, "a wire bonding . . . are effected only towards one side of said heat sink" is unclear and appears to be incorrect. In particular, it appears that if a wire bonding is effected in a direction toward one side of the heat sink, it is necessarily effected in a direction toward another side of the heat sink.

The following is a quotation of MPEP 2111.01 [R-3] Plain Meaning:

**I. THE WORDS OF A CLAIM MUST BE GIVEN THEIR "PLAIN MEANING" UNLESS THEY ARE DEFINED IN THE SPECIFICATION**

While the claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. In *re American Academy of Science Tech Center*, 367 F.3d 1359, 1369, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004) (The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation.). This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In *re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (discussed below); *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004) (Ordinary, simple English words whose meaning is clear and unquestionable, absent any indication that their use in a particular context changes their meaning, are construed to mean exactly what they say. Thus, "heating the resulting batter-coated dough to a temperature in the range of about 400°F to 850°F" required heating the dough, rather than the air inside an oven, to the specified temperature.). One must bear in mind that, especially in nonchemical cases, the words in a claim are generally not limited in their meaning by what is shown or disclosed in the specification. See, e.g., *Liebel-Flarsheim Co. v. Medrad Inc.*, 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004) (discussing recent cases wherein the court expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment). It is only when the specification provides definitions for terms appearing in the claims that the specification can be used in interpreting claim language. In *re Vogel*, 422 F.2d 438, 441, 164 USPQ 619, 622 (CCPA 1970). See also *Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004) ("Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment."); *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) ("Interpretation of descriptive statements in a patent's written description is a difficult task, as an inherent tension exists as to whether a statement is a clear lexicographic definition or a description of a preferred embodiment. The problem is to interpret claims in view of the specification without unnecessarily importing limitations from the specification into the claims."); *Altiris Inc. v. Symantec Corp.*, 318 F.3d 1363, 1371, 65 USPQ2d 1865, 1869-70 (Fed. Cir. 2003) (Although the specification discussed only a single embodiment, the court held that it was improper to read a specific order of steps into method claims where, as a matter of logic or grammar, the language of the method claims did not impose a specific order on the performance of the method steps, and the specification did not directly or implicitly require a particular order). See also paragraph III., below. There is one exception, and that is when an element is claimed using language falling under the scope of 35 U.S.C. 112, 6th paragraph (often broadly referred to as means or step plus function language). In that case, the specification must be consulted to determine the structure, material, or acts corresponding to the function recited in the claim. In *re Donaldson*, 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994) (see MPEP § 2181- § 2186). In *re Zletz*, supra, the examiner and the Board had interpreted claims

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reading "normally solid polypropylene" and "normally solid polypropylene having a crystalline polypropylene content" as being limited to "normally solid linear high homopolymers of propylene which have a crystalline polypropylene content." The court ruled that limitations, not present in the claims, were improperly imported from the specification. See also *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) ("Claims are not to be read in a vacuum, and limitations therein are to be interpreted in light of the specification in giving them their broadest reasonable interpretation." 710 F.2d at 802, 218 USPQ at 292 (quoting *In re Okuzawa*, 537 F.2d 545, 548, 190 USPQ 464, 466 (CCPA 1976)) (emphasis in original). The court looked to the specification to construe "essentially free of alkali metal" as including unavoidable levels of impurities but no more.). Compare *In re Weiss*, 989 F.2d 1202, 26 USPQ2d 1885 (Fed. Cir. 1993) (unpublished decision - cannot be cited as precedent) (The claim related to an athletic shoe with cleats that "break away at a preselected level of force" and thus prevent injury to the wearer. The examiner rejected the claims over prior art teaching athletic shoes with cleats not intended to break off and rationalized that the cleats would break away given a high enough force. The court reversed the rejection stating that when interpreting a claim term which is ambiguous, such as "a preselected level of force", we must look to the specification for the meaning ascribed to that term by the inventor." The specification had defined "preselected level of force" as that level of force at which the breaking away will prevent injury to the wearer during athletic exertion. It should be noted that the limitation was part of a means plus function element.)

In claim 12 the scope of the language "two color printing process" is unclear because the language is not clearly defined in the disclosure, and it otherwise has no plain meaning.

Claims 3, 8, 11 and 12 have not been rejected over the prior art because, in light of the rejections *supra*, there is a great deal of confusion and uncertainty as to the proper interpretation of the limitations of the claims; hence, it would not be proper to reject the claims on the basis of prior art. As stated in *In re Steele*, 305 F.2d 859, 134 USPQ 292 (CCPA 1962), a rejection should not be based on considerable speculation about the meaning of terms employed in a claim or assumptions that must be made as to the scope of the claims. Also see *In re Wilson*, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970) (if no reasonably definite meaning can be

ascribed to certain claim language, the claim is indefinite, not obvious). See also MPEP 2143.03 and 2173.06.

In the rejections *infra*, generally, reference labels are recited only for the first recitation of identical claim elements.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 6, 7, 13, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (4763188) and Abbott (20030137032).



At column 1, lines 34-40 and 53-56; column 2, lines 21-24; column 3, line 1 to column 5, line 43; and column 6, lines 47-49, Johnson discloses the following:

A electronic circuit apparatus comprising: at least two wiring circuit boards 13, 14 each of which is mounted with at least two electronic components 15, 16, 18, 19; a heat sink 29 on which said wiring circuit boards are fixed, said heat sink inherently having a higher heat conductivity than that of said wiring circuit boards; an external connection terminal 12 electrically connected to said wiring circuit boards; and a resin composition with which the entire surfaces of said wiring circuit boards, a part of said heat sink and a part of said external connection terminal are integrally molded, wherein: said wiring circuit boards on which all necessary electronic components are mounted in advance are fixed to the top and bottom of said heat sink via an adhesive layer 28, 30; wherein a part of a passage (the space between any two or more leads, illustrated in FIG. 1, not labeled) for circulating a cooling medium is inherently formed in an external layer of said electronic circuit apparatus.

An electronic circuit apparatus comprising: a wiring circuit board on which at least two electronic components are mounted; a heat sink to which said wiring circuit board is fixed, said heat sink having a higher heat conductivity than that of said wiring circuit board; an external connection

terminal electrically connected to said wiring circuit board; and a resin composition with which the entire surface of said wiring circuit board, at least a part of said heat sink and a part of said external connection terminal are integrally molded, wherein: a part of a passage for circulating a cooling medium is inherently formed in an external layer of said electronic circuit apparatus; wherein said heat sink is made of a metal compound with electrical conductivity, and wherein said adhesive layer is formed by an insulating organic paste "epoxy . . . of the non-electrically conductive type"; wherein at least one of said wiring circuit boards is a ceramic substrate.

To further clarify the disclosure of the heat sink inherently having a higher heat conductivity than that of said wiring circuit boards, the heat conductivity of the tin alloy heat sink is inherently higher than that of the "epoxy impregnated glass" of Johnson.

To further clarify the disclosure that a part of a passage (the space between any two or more leads, illustrated in FIG. 1, not labeled) for circulating a cooling medium is inherently formed in an external layer of said electronic circuit apparatus, the language "for circulating a cooling medium" is a statement of intended use of the passage that does not appear to result in a structural difference between the claimed passage and the passage of Johnson. Further, because the passage of Johnson appears to have the same structure as the claimed passage, it appears to be capable of being

used for the intended use, and the statement of intended use does not patentably distinguish the claimed passage from the passage of Johnson. The manner in which a product operates is not germane to the issue of patentability of the product; Ex parte Wikdahl 10 USPQ 2d 1546, 1548 (BPAI 1989); Ex parte McCullough 7 USPQ 2d 1889, 1891 (BPAI 1988); In re Finsterwalder 168 USPQ 530 (CCPA 1971); In re Casey 152 USPQ 235, 238 (CCPA 1967). Also, "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim."; Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969). And, "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims."; In re Young, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 136 USPQ 458, 459 (CCPA 1963)). And, claims directed to product must be distinguished from the prior art in terms of structure rather than function. In re Danley, 120 USPQ 528, 531 (CCPA 1959). "Apparatus claims cover what a device is, not what a device does [or is intended to do]." Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

However, Johnson does not appear to explicitly disclose a thermosetting resin composition; wherein said heat sink is made of a clad material containing a copper alloy or copper.

Nonetheless, at paragraphs 7, 48, 54, 55, 62 and claim 8, Abbott discloses a thermosetting resin composition 311 wherein a heat sink "leadframe" is made of a clad material 21 containing copper. Moreover, it would have been obvious to combine this disclosure of Abbott with the disclosure of Johnson because it would facilitate provision of the resin composition and heat sink of Johnson, and, as disclosed by Abbott as cited, it would provide good adhesion of the resin composition and heat sink.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson and Abbott as applied to claim 1, and further in combination with Akram (20010003373).

As cited, Johnson discloses wherein all of the electronic components mounted on one of said wiring circuit board are mounted by bonding bare "unpackaged" chip components with a wire 23, and wherein all of the electronic components mounted on the other wiring circuit board are mounted by "a layer 31 of epoxy of [sic] other suitable bonding material."

However, Johnson does not appear to explicitly disclose that the components mounted on the other wiring circuit board are mounted by solder.

Nevertheless, at paragraph 21, Akram discloses that epoxy and solder are alternatives and equivalents; therefore, as reasoned from well established legal precedent, it would have been obvious to substitute or

combine the solder of Akram for or with the epoxy of Johnson. See *In re May* (CCPA) 136 USPQ 208 (It is our opinion that the substitution of Wille's type seal for the cement of Hallauer in Figure 1 would be obvious to persons of ordinary skill in the art from the disclosures of these references, merely involving an obvious selection between known alternatives in the art and the application of routine technical skills.); *In re Cornish* (CCPA) 125 USPQ 413; *In re Soucy* (CCPA) 153 USPQ 816; *Sabel et al. v. The Wickes Corporation et al.* (DC SC) 175 USPQ 3; *Ex parte Seiko Koko Kabushiki Kaisha Co.* (BdPatApp&Int) 225 USPQ 1260; and *Ex parte Rachlin* (BdPatApp&Int) 151 USPQ 56. See also *Smith v. Hayashi*, 209 USPQ 754 (Bd. of Pat. Inter. 1980) (However, there was evidence that both phthalocyanine and selenium were known photoconductors in the art of electrophotography. "This, in our view, presents strong evidence of obviousness in substituting one for the other in an electrophotographic environment as a photoconductor." 209 USPQ at 759.). An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. *In re Fout*, 675 F.2d 297, 213 USPQ 532 (CCPA 1982). "It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in

the prior art." In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted). "For example, where a claimed apparatus requiring Phillips head screws differs from a prior art apparatus describing the use of flathead screws, it might be hard to find motivation to substitute flathead screws with Phillips head screws to arrive at the claimed invention. However, the prior art would make it more than clear that Phillips head screws and flathead screws are viable alternatives serving the same purpose. Hence, the prior art would 'suggest' substitution of flathead screws for Phillips head screws albeit the prior art might not 'motivate' use of Phillips head screws in place of flathead screws. Ex parte Jones, 62 USPQ2d 1206 (BdPatApp&Int 2001). See also In re Crockett, 279 F.2d 274, 126 USPQ 186 (CCPA 1960); Ex parte Quadranti, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson and Abbott as applied to claim 13, and further in combination with Yamamoto (20010022404).

Although, as cited, Johnson discloses wherein the adhesive layer is made of a resin composition containing epoxy resin or "other suitable bonding material," Johnson and Abbot do not appear to explicitly disclose that the adhesive layer is made of a thermosetting resin composition containing an inorganic filler.

Notwithstanding, at paragraphs 44, 52, 53, 131 and 132, Yamamoto discloses a thermosetting resin composition containing an epoxy resin and an inorganic filler. In addition, it would have been obvious to combine this disclosure of Yamamoto with the disclosure of Johnson and Abbot because it would facilitate provision of the epoxy resin of Johnson and Abbot, and, as disclosed by Yamamoto as cited, it would provide desirable adhesive layer properties.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson and Abbot as applied to claim 1, and further in combination with Krause (20010005048).

Johnson and Abbot does not appear to explicitly disclose wherein at least one of said wiring circuit boards is a flexible polyimide wiring circuit board.

Regardless, at paragraphs 11-13 and 22, Krause discloses a flexible polyimide wiring circuit board. Furthermore, it would have been obvious to combine this disclosure of Krause with the disclosure of Johnson and Abbot because, as disclosed by Abbot as cited, it would eliminate soldering of wire bridges.

Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

In response to this requirement, please provide answers to the following interrogatory eliciting factual information:

1. Is the following prior art?:

An (any) electronic circuit apparatus is fixed on an interior of an automatic transmission assembly of an automobile and a passage for circulating a transmission fluid is formed in any part of the electronic apparatus to cool the apparatus.

If, yes, please submit the most relevant examples of the prior art.

Applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained will be accepted as a complete reply to the requirement for that item.

A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

The art made of record and not applied to the rejection is considered pertinent to applicant's disclosure. It is cited primarily to show inventions relevant to the examination of the instant invention.

**For information on the status of this application applicant should check PAIR:**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

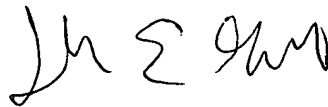


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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Alternatively, applicant may contact the File Information Unit at (703) 308-2733. Telephone status inquiries should not be directed to the examiner. See MPEP 1730VIC, MPEP 203.08 and MPEP 102.**

Any other telephone inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Graybill at (571) 272-1930. Regular office hours: Monday through Friday, 8:30 a.m. to 6:00 p.m.  
The fax phone number for group 2800 is (571) 273-8300.



David E. Graybill  
Primary Examiner  
Art Unit 2822

D.G.  
20-Jul-06